



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/005,085	12/04/2001	Anthony C. Mulligan	003248.00045	8564

22908 7590 03/17/2003

BANNER & WITCOFF, LTD.  
TEN SOUTH WACKER DRIVE  
SUITE 3000  
CHICAGO, IL 60606

EXAMINER

SAVAGE, JASON L

ART UNIT	PAPER NUMBER
----------	--------------

1775

7

DATE MAILED: 03/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

AS2

**Office Action Summary**

Application No.

10/005,085

Applicant(s)

MULLIGAN ET AL.

Examiner

Jason L Savage

Art Unit

1775

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-24 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

Art Unit: 1775

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-14, drawn to a monolithic structure, classified in class 428, subclass 614.
  - II. Claims 15-18, drawn to a method of forming a piezoelectric/electrostrictive structure, classified in class 264, subclass 104.
  - III. Claim 19, drawn to a composite part, classified in class 428, subclass 457.
  - IV. Claim 20, drawn to a monolithic structure, classified in class 428, subclass 375.
  - V. Claims 21 and 24, drawn to a monolithic structure, classified in class 428, subclass 375.
  - VI. Claims 22-24, drawn to a monolithic structure, classified in class 428, subclass 380.

2. The inventions are distinct, each from the other because of the following reasons:  
Inventions I and II are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01).

It was noted that claims 16-18 depend from claim 1, however, given that claim 1 is drawn to an article claim, not a method, and that claims 16-18 refer to limitations such as 'the electrically conductive material' which can not be found in claim 1, it is believe that making these claims dependent on claim 1 was an oversight. The subject matter of claims 16-18 appear in line with claim 15, and has been treated as if it depends from claim 15.

Art Unit: 1775

In the instant case the inventions differ in that Group I is drawn to a fibrous monolith structure having 3 phases while Group II is drawn to a method of forming a piezoelectric/electrostrictive structure having a core and shell structure.

Inventions I and III are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the inventions differ in that Group I is drawn to a fibrous monolith structure having 3 phases while Group III is drawn to a composite part having 2 phases which include repeated structural units each comprising an ordered microstructure of each of the phases.

Inventions I and IV are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the inventions differ in that Group I is drawn to a fibrous monolith structure having 3 phases while Group IV is drawn to a monolith having a core material and shell material wherein one material is conductive and one is insulating.

Inventions I and V are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the inventions differ in that Group I is drawn to a fibrous monolith structure having 3 phases while

Art Unit: 1775

Group V is drawn to a monolith having a core material and shell material wherein only one of the materials is a piezoelectric material.

Inventions I and VI are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the inventions differ in that Group I is drawn to a fibrous monolith structure having 3 phases while Group VI is drawn to a monolith having a core material and shell material wherein the materials comprise different electromotive potentials.

Inventions II and III are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the inventions differ in that Group II is drawn to a method of forming a piezoelectric/electrostrictive structure having a shell and core structure while Group III is drawn to a composite part having 2 phases which include repeated structural units each comprising an ordered microstructure of each of the phases.

Inventions II and IV are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the inventions differ in that Group II is a method of forming a piezoelectric/electrostrictive structure

Art Unit: 1775

having a shell and core structure while Group IV is drawn to a monolith having a core material and shell material wherein one material is conductive and one is insulating.

Inventions II and V are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the inventions differ in that Group II is a method of forming a piezoelectric/electrostrictive structure having a shell and core structure while Group V is drawn to a monolith having a core material and shell material wherein only one of the materials is a piezoelectric material.

Inventions II and VI are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the inventions differ in that Group II is a method of forming a piezoelectric/electrostrictive structure having a shell and core structure while Group VI is drawn to a monolith having a core material and shell material wherein the materials comprise different electromotive potentials.

Inventions III and IV are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the inventions differ in that Group III is a composite part having 2 phases which include repeated structural units each comprising an ordered microstructure of each of the phases while Group IV

Art Unit: 1775

is drawn to a monolith having a core material and shell material wherein one material is conductive and one is insulating.

Inventions III and V are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the inventions differ in that Group III is a composite part having 2 phases which include repeated structural units each comprising an ordered microstructure of each of the phases while Group V is drawn to a monolith having a core material and shell material wherein only one of the materials is a piezoelectric material.

Inventions III and VI are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the inventions differ in that Group III is a composite part having 2 phases which include repeated structural units each comprising an ordered microstructure of each of the phases while Group VI is drawn to a monolith having a core material and shell material wherein the materials comprise different electromotive potentials.

Inventions IV and V are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the inventions differ in that Group IV is drawn to a monolith having a core material and shell

Art Unit: 1775

material wherein one material is conductive and one is insulating while Group V is drawn to a monolith having a core material and shell material wherein only one of the materials is a piezoelectric material.

Inventions IV and VI are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the inventions differ in that Group IV is drawn to a monolith having a core material and shell material wherein one material is conductive and one is insulating while Group VI is drawn to a monolith having a core material and shell material wherein the materials comprise different electromotive potentials.

Inventions V and VI are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the inventions differ in that Group V is drawn to a monolith having a core material and shell material wherein only one of the materials is a piezoelectric material while Group VI is drawn to a monolith having a core material and shell material wherein the materials comprise different electromotive potentials.



Art Unit: 1775

3. Because these inventions are distinct for the reasons given above and the search required for and of Groups I-VI is not required for Group , restriction for examination purposes as indicated is proper.

4. A telephone call was made to Rebecca Rooks on 2-28-03 to request an oral election to the above restriction requirement, but did not result in an election being made

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CAR 1.143).

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventor ship must be amended in compliance with 37 CAR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventor ship must be accompanied by a request under 37 CAR 1.48(b) and by the fee required under 37 CAR 1.17(I).

Art Unit: 1775

6. Any inquiry to this communication or earlier communications from the Examiner should be directed to Jason Savage, whose telephone number is (703)305-0549. The Examiner can normally be reached Monday to Friday from 6:30 AM to 4:00 PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Deborah Jones, can be reached on (703)308-3822.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703)308-2351.

Jason Savage

2-28-03

  
JOHN J. ZIMMERMAN  
PRIMARY EXAMINER